United States Department of Agriculture

Forest Service

Pacific Southwest Region

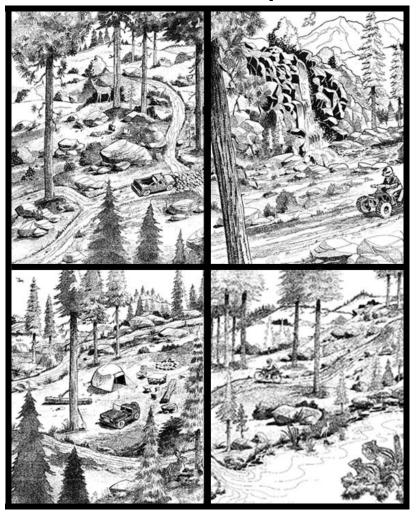
Sierra National Forest

R5-MB-190 April 2009



Travel Management

Draft Environmental Impact Statement



The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TTY). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TTY). USDA is an equal opportunity provider and employer. Printed on recycled paper – April, 2009.

Travel Management EIS Draft Environmental Impact Statement

Lead Agency: USDA Forest Service

Cooperating Agencies: None

Responsible Official: Ed Cole, Forest Supervisor

Sierra National Forest 1600 Tollhouse Road Clovis, CA 93611

For further information, contact:

Gayne Sears SNF, Bass Lake Ranger District, 57003 Rd 225 North Fork, CA 93643

Phone: (559) 877-2218 extension 3182.

Email: sierra.route@fs.fed.us

Abstract: This Draft Environmental Impact Statement (DEIS) describes the environmental effects of a proposal by the Sierra National Forest (SNF) to: 1. Prohibit motor vehicle travel off designated National Forest Transportation System (NFTS) roads, trails and areas by the public except as allowed by permit or other authorization. 2. Add 40 miles of existing unauthorized routes (with proposed season of use) to the current system of National Forest Transportation System (NFTS) trails and 6 miles to the current system of NFTS roads and permanently convert 91 miles of NFTS roads to NFTS trails 3. Add one area, totaling 6 acres, where use of motor vehicles by the public would be allowed anywhere within that area. 4. Allow non-highway legal vehicle use on approximately 91 miles of existing NFTS roads where such use is currently prohibited and prohibit all vehicle use on 204 miles of existing NFTS roads (see Chapter 2 description of Alternative 2 for an explanation of why the mileage totals have changed since the publication of the Notice of Intent in September 2007). And 5; this DEIS proposes a nonsignificant Forest Plan (LRMP) amendment to designate two trail additions to the NFTS (0.77 miles) within the Recreation Opportunity Spectrum (ROS) class Semi-Primitive, Non-Motorized area as defined in the SNF Forest Plan (LRMP). These actions are needed in order to implement the 2005 Travel Management Rule (36 CFR Part 261) while providing for a diversity of motor vehicle recreation opportunities and providing motorized access to dispersed recreation opportunities on the SNF. The DEIS discloses environmental impacts associated with the proposed action, a no action alternative and three additional action alternatives developed in response to issues raised by the public. Maps of each alternative can be found in Appendix K.

Public Comment: It is important that reviewers provide their comments at such times and in such a way that they are useful to the Agency's preparation of the EIS. Therefore, comments should be provided prior to the close of the comment period and should clearly articulate the reviewer's concerns and contentions. The submission of timely and specific comments can affect a reviewer's ability to participate in subsequent administrative review or judicial review.

Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the respondent with standing to participate in subsequent administrative review or judicial review.

Sierra National Forest İ 4/28/2009

Table of Contents

| Summary of the Draft Environmental Impact Statement (DEIS) | |
|--|-----|
| Chapter 1 – Purpose and Need | |
| Document Structure | |
| Background | |
| Purpose and Need | |
| Proposed Action | |
| Decision Framework | |
| Public Involvement | |
| Issues | |
| Chapter 2 – AlternativesIntroduction | |
| Part 1 – How the Alternatives were Developed | |
| Part 2 – Alternatives Considered in Detail | |
| Part 3 – Alternatives Considered in Detail Part 3 – Alternatives Considered, but Eliminated from Detailed Analysis | |
| Part 4 – Comparison of Alternatives | |
| Chapter 3 – Affected Environment and Environmental Consequences. | |
| Introduction | |
| Social Environment | |
| Transportation Facilities | |
| Recreation Resources | |
| Society, Culture and Economy | 95 |
| Visual Resources | |
| Cultural Resources | 138 |
| Physical Environment | 156 |
| Air Quality | |
| Soil Resource | |
| Geological Resources | |
| Water Resources | |
| Biological Environment | |
| Botanical Resources | |
| Noxious Weeds | |
| Terrestrial Wildlife | |
| Aquatic Biota | |
| Chapter 4 – Consultation and Coordination | |
| Appendices Appendix A – Summary of Route Specific Data | A |
| Appendix A – Summary of Route Specific Data Appendix B – Mitigation Measures and Monitoring | |
| Appendix C – References | |
| Appendix D – Law Enforcement | Δ |
| Appendix E – Past, Present, Reasonably Foreseeable Activities | |
| Appendix F – Glossary | |
| Appendix G – Trail Standards | A |
| Appendix H – Best Management Practices | |

| Appendix I – Traffic Rule Options | A |
|--|------|
| Appendix J - RCO Consistency Analysis | A |
| Appendix K – Maps | A |
| Appendix L – List of Quarter Quadrangle Maps by Analysis Unit and List of | of |
| Routes per Quarter Quadrangle Maps | A |
| | |
| List of Tables | |
| Table 1. List of Significant Issues | xiii |
| Table 2. List of Alternatives Considered in Detail | |
| Table 3. Analysis Unit Abbreviations | |
| Table 4. Alternative 1 – Summary of Actions | |
| Table 5. Alternative 1 – Season of Use Grouped by Date and Vehicle Use | |
| (Existing NFTS Roads) per 1998 Road Closure Plan (as modified) | 24 |
| Table 6. Alternative 2 – Summary of Actions | 26 |
| Table 7. Alternative 2 – Miles of Road Added to the NFTS by Analysis Unit | |
| Table 8. Alternative 2 – Miles of Trails Added to the NFTS by Analysis Unit | 27 |
| Table 9. Alternative 2 – Season of Use (Proposed Addition of Use Area) | |
| Table 10. Alternative 2 – Season of Use Grouped by Date (Proposed Additions | |
| of Unauthorized Routes) | |
| Table 11. Alternative 2 – Season of Use Grouped by Date (Existing NFTS | |
| Roads) | |
| Table 12. Alternative 2 – Proposed Changes in Vehicle Class, NFTS Roads | 29 |
| Table 13. Alternative 2 – Proposed Closures, NFTS Roads | 29 |
| Table 14. Alternative 3 – Summary of Actions | |
| Table 15. Alternative 4 – Summary of Actions | 31 |
| Table 16. Alternative 4 - Miles of Road Added to the NFTS by Analysis Unit | 31 |
| Table 17. Alternative 4 - Miles of Trails Added to the NFTS by Analysis Unit | 32 |
| Table 18. Alternative 4 – Season of Use Grouped by Date (Proposed Additions | s of |
| | 32 |
| Table 19. Alternative 4 – Season of Use Grouped by Date (Proposed Additions | s of |
| Unauthorized Routes) | 33 |
| Table 20. Alternative 4 – Season of Use Grouped by Date (Existing NFTS | |
| Roads) | 33 |
| Table 21. Alternative 4 – Proposed Changes in Vehicle Class, NFTS Roads | |
| Table 22. Alternative 4 – Proposed Closures, NFTS Roads | |
| Table 23. Alternative 5 – Summary of Actions | 35 |
| Table 24. Alternative 5 – Miles of Road Added to the NFTS by Analysis Unit | |
| Table 25. Alternative 5 – Miles of Trails Added to the NFTS by Analysis Unit | |
| Table 26. Alternative 5 – Season of Use Grouped by Date (Proposed Additions | |
| Use Areas) | 36 |
| Table 27. Alternative 5 – Season of Use Grouped by Date (Proposed Additions | |
| Unauthorized Routes) | 37 |
| Table 28. Alternative 5 – Season of Use Grouped by Date (Existing NFTS | _ |
| Roads) | |
| Table 29. Alternative 5 – Proposed Changes in Vehicle Class, NFTS Roads | 38 |

| Table 30. Alternative 5 – Proposed Closures, NFTS Roads | 38 |
|--|---------|
| Table 31. Summary Comparison of Alternatives | 41 |
| Table 32. Summary Direct and Indirect Effects of the Alternatives on Forest | |
| Resources | 42 |
| Table 33. Summary of the NFTS by Alternative | 64 |
| Table 34. Funding Required to Maintain the Road System to Standard | |
| Table 35. Funding Required to Maintain Motorized Trails to Standard by | |
| Alternative | 66 |
| Table 36. Summary of the Estimated Annual and Initial Implementation Costs. | 66 |
| Table 37. Primitive Roads Managed as Motorized Trails | 68 |
| Table 38. Sierra National Forest ROS Classes | |
| Table 39. Summary of Additions of Trails to NFTS by ROS Class by Alternativ | e |
| | 77 |
| Table 40. Summary of Additions of Roads to NFTS by ROS Class by Alternati | ve |
| | 77 |
| Table 41. Summary of Additions of Areas to NFTS by ROS Class by Alternative | /e |
| | 77 |
| Table 42. Acreage Outside 1/2 mile of Proposed Additions to the NFTS as a | |
| Measurement Indicator of Acreage Available for Quiet Recreation and Nor |)- |
| Motorized Activities without the Potential for Use Conflicts with Motor | 70 |
| Vehicles | 78 |
| Table 43. Road Mileage Open to the Public Forestwide by Alternative (Class of Vehicle and Season of Line) | |
| Vehicle and Season of Use) Table 44. Trail Mileage Open to the Public Forestwide by Alternative (Class of | 78 • |
| Vehicle and Season of use) | |
| Table 45. Trail Mileage Open to the Public Forestwide by Alternative by Degree | |
| of Difficulty | 81 |
| Table 46. Open Area Acreage Forestwide by Alternative by Vehicle Class | |
| Table 47. Number of Dispersed Recreation Sites Accessed by Proposed | |
| Additions to the NFTS by Alternative | 82 |
| Table 48. Miles of Proposed Additions to the NFTS within 1/2 Mile of Neighbor | _ |
| Private and Federal Lands by Alternative | |
| Table 49. SNF Visitor Activity Participation and Primary Activity As Reported In | n |
| NVUM Results (2002 and 2007) | 86 |
| Table 50. Approximate SNF Visitors by Type of Main Activity as Reported in | |
| NVUM Results (2002 and 2007) | |
| Table 51. Percent of SNF Region County Populations by Ethnicity, 2004 | 97 |
| Table 52. Percent of Population of SNF Region Counties by Age Group | 97 |
| Table 53. Sector Analysis | 98 |
| Table 54. Activity Participation on Sierra National Forest | 102 |
| Table 55. Number of Visits by Activity | |
| Table 56. Expenditures by Activity | |
| Table 57. Employment and Labor Income Response Coefficients by Activity T | |
| T.I. 50 F. I | 108 |
| Table 58. Employment and Labor Income Effects by Activity Type | 110 |

| Table 59. Percent of Total Employment and Labor Income Effects by Activity | |
|---|----------|
| Type | 111 |
| Table 60. Total Employment and Labor Income Effects | 112 |
| Table 61. Percent of Total Area Employment and Total Area Labor Income | |
| Effects | |
| Table 62. Road and Trail Construction and Maintenance Budget | 113 |
| Table 63. Federal Laws Relevant to American Indian Concerns Regarding | |
| National Forest Management | 114 |
| Table 64. Summary of Miles for the Proposed NFTS Additions (Roads and | |
| Motorized Trails) within Retention VQO | 127 |
| Table 65. Summary of Miles for the Proposed NFTS Additions (Roads and | |
| Motorized Trails) within Retention VQO that are in Sparsely Canopy Cove | red |
| or Non-canopy Covered Landscapes | |
| Table 66. Summary of Miles for the Proposed NFTS Additions (Roads and | 121 |
| Motorized Trails) within Partial Retention VQO | 128 |
| Table 67. Summary of Miles for the Proposed NFTS Additions (Roads and | 120 |
| Motorized Trails) within Partial Retention VQO that are in Sparsely Canop | M |
| , | - |
| Covered or Non-canopy Covered Landscapes | 120 |
| Table 68. Summary of Acres for the Proposed NFTS Additions (Use Areas) | 400 |
| within Retention VQO | 129 |
| Table 69. Summary of Acres for the Proposed NFTS Additions (Use Areas) | |
| within Retention VQO that are in Sparsely Canopy Covered or Non-canop | y |
| Covered Landscapes | 129 |
| Table 70. Summary of Acres for the Proposed NFTS Additions (Use Areas) | |
| within Partial Retention VQO | 130 |
| Table 71. Summary of Acres for the Proposed NFTS Additions (Use Areas) | |
| within Partial Retention VQO that are in Sparsely Canopy Covered or Nor | |
| canopy Covered Landscapes | |
| Table 72. Total Miles for the Proposed NFTS Additions (Roads and Motorized | 1 |
| Trails) | |
| Table 73. Total Acres for the Proposed NFTS Additions (Use Areas) | 137 |
| Table 74. Severity of Effects | 141 |
| Table 75. Status of Cultural Resources Survey within APE | 147 |
| Table 76. Alternative 2 – Effects to Cultural Resources | |
| Table 77. Alternative 4 – Effects to Cultural Resources | 152 |
| Table 78. Alternative 5 – Effects to Cultural Resources | |
| Table 79. California Air Quality Standards Pertinent | |
| Table 80. Proposed Additional NFTS Miles per Alternative | |
| Table 81. Number and Miles of Routes (Alternative 1) or Proposed Additions to | |
| the NFTS (Alts 2 through 5) Intersecting with Potential NOA Terrain | |
| Table 82. Hydrologic Function Class – Susceptibility to Mechanical Rutting an | |
| High Erosion | |
| Table 83. Ten Most Prevalent Dominant Soil Map Units Affected by Unauthori | |
| | |
| Motorized Routes | |
| Table 84. List of Sensitive Soil Map Units and Unauthorized Motorized Routes | |
| | 1/3 |

| Table 85. Alternative 2 – Proposed Routes with Adverse Effect | .177 |
|---|-------|
| Table 86. Alternative 2 – Proposed Routes that Require Additional Mitigation | |
| Measures | .178 |
| Table 87. Alternative 4 – Use Areas | .181 |
| Table 88. Alternative 5 – Proposed Routes with Adverse Effects | .182 |
| Table 89. Alternative 5 - Proposed Routes That Require Additional Mitigation | |
| Measures | |
| Table 90. Alternative 5 – Use Areas | |
| Table 91. Soil Resources, Summary of Effects Analysis across All Alternative | es |
| | |
| Table 92. Summary of Routes Contributing to AML Accessibility and Exposur | ·e |
| | |
| Table 93. Alternative 1 – Routes by Distance and Database | .190 |
| Table 94. Alternative 2 – Routes by Distance and Database | |
| Table 95. Alternative 4 – Routes by Distance and Database | |
| Table 96. Alternative 5 – Routes by Distance and Database | |
| Table 97. Data Sources Used in the Analysis of Effects to Water Resources . | |
| Table 98. Comparison of Feature Type, Stream Order, Flow Regime | |
| Classification and RCA Widths Delineated for this Project | .205 |
| Table 99. Miles of Order 1 Stream Channels that Lie Within And Outside of th | |
| RCAs Delineated for this Project | .206 |
| Table 100. Miles of Stream and Acres of Meadows and RCAs in each Analys | is |
| | .206 |
| Table 101. Critical Aquatic Refuges by Analysis Unit; Acres within Analysis U | nit, |
| Percent of Total CAR Acres in the Project Area | .207 |
| Table 102. Available Mean Monthly Stream Flow Records | .210 |
| Table 103. Designated Beneficial Uses for the Major Perennial Drainages of t | |
| Project Area | |
| Table 104. V* Reach Data 2003-2004 | .216 |
| Table 105. Stream Segments and/or Tributaries that have had SCI Surveys | |
| Conducted | .217 |
| Table 106. PFC Assessments by Analysis Unit | .218 |
| Table 107. Summary of Channel Sensitivity Ratings by Mile for Each of the | |
| Analysis Units, Including Pfankuch Stability Ratings | .219 |
| Table 108. Motorized Route Density (Existing NFTS Roads / Inventoried Rou | tes / |
| Total) by Analysis Unit | |
| Table 109. Miles of Routes in RCAs (Existing NFTS Roads / Inventoried Routes) | tes / |
| Total) by Analysis Unit | |
| Table 110. Stream Crossing Numbers and Densities (Existing NFTS Roads / | |
| Inventoried Routes / Total) by Analysis Unit | .221 |
| Table 111. Comparison of Extent of Sensitive Soil by Analysis Unit (Analysis | |
| Unit) Relative to Road/Route and Drainage Crossing Density | |
| Table 112. Acres of Managed Use Areas and Acres in RCAs | |
| Table 113. Miles of Roads Open Year Round in RCAs, Miles of Roads Close | |
| Year Round in RCAs and Numbers of Stream Crossing on those Roads | .223 |

| Table 114. HUC8s Evaluated In a Detailed Assessment, Including the HUC6 they |
|---|
| are within, their Existing ERAs and the Conclusion of the Existing Level of |
| Risk of CWEs225 |
| Table 115. Open and Closed Acres and Inventoried Routes in RCAs234 |
| Table 116. Acres and Miles of Unauthorized Routes in CARs that would be Open |
| to Continued Motor Vehicle Use234 |
| Table 117. Number and Density of Routes in RCAs and Stream Crossings and |
| Acres of Added Use Areas in RCAs237 |
| Table 118. Miles of Routes and Acres of Areas with Known Erosion Features |
| Added to the NFTS in Alternative 2238 |
| Table 119. Number of Documented Stream Channel Diversions and Potential |
| Diversion Locations Added to the NFTS in Alternative 2 |
| Table 120. Miles of Changes to Winter Season Road Restrictions, Including |
| Roads Closed Year Round240 |
| Table 121. Miles of Roads Open Year Round in RCAs, Miles of Roads Closed |
| Year Round in RCAs and Numbers of Stream Crossing on those Roads242 |
| Table 122. Subdrainages with Additions to the NTFS in Alternative 2 that were |
| Evaluated in the Detailed CWE Assessment |
| Table 123. Number and Density of Routes in RCAs and Stream Crossings and |
| Acres of Added Use Areas in RCAs |
| Table 124. Miles of Routes and Acres of Areas with Known Erosion Features |
| Added to the NFTS in Alternative 4247 |
| Table 125. Number of Documented Stream Channel Diversions and Potential |
| Diversion Locations Added to the NFTS in Alternative 4247 |
| Table 126. Miles of Changes to Winter Season Road Restrictions in Alternative |
| 4, Including Roads Closed Year Round249 |
| Table 127. Miles of Roads Open Year Round in RCAs, Miles of Roads Closed |
| Year Round in RCAs and Numbers of Stream Crossing On Those Roads.250 |
| |
| Table 128. HUC8 Subdrainages Evaluated in the Detailed Cumulative Watershed |
| Effects Assessment that have Additions to the NTFS in Alternative 4252 |
| Table 129. Number and Density of Routes in RCAs and Stream Crossings and |
| Acres of Added Use Areas in RCAs253 Table 130. Miles of Routes and Acres of Areas with Known Erosion Features |
| |
| Added to the NFTS in Alternative 5 |
| Table 131. Number of Documented Stream Channel Diversions and Potential |
| Diversion Locations Added to the NFTS in Alternative 5 |
| Table 132. Miles of Changes to Winter Season Road Restrictions in Alternative 5 |
| (Includes Roads Closed Year Round)256 |
| Table 133. Miles of Roads Open Year Round in RCAs, Miles of Roads Closed |
| Year Round in RCAs and Numbers of Stream Crossing on those Roads in |
| Alternative 5257 |
| Table 134. Subdrainages with Additions to the NTFS in Alternative 5 that are |
| Over the Lower TOC259 |
| Table 135. Summary of Forestwide Environmental Consequences260 |
| Table 136. Summary of the Detailed Assessment Conclusions Regarding the |
| Risk of Cumulative Watershed Effects by Alternative261 |

| Table 137. Summary of Detailed CWE Assessment – Risk of CWEs for each | |
|--|------|
| | .262 |
| Table 138. Rare Plants Included in this Analysis | |
| Table 139. Rare Plants Excluded from Further Analysis | |
| Table 140. Rare Plant Occurrences by Analysis Unit on the SNF | .279 |
| Table 141. Alternative 2 – Unauthorized Routes added as NFTS Trails with | |
| Resource Issues | .291 |
| Table 142. Alternative 2 – Unauthorized Routes Added as NFTS Roads with | |
| | .291 |
| Table 143. Alternative 2 – Use Areas with Resource Issues | .292 |
| Table 144. Alternative 2 – Road Closures for Botanical Resource Issues | .292 |
| Table 145. Alternative 4 – Unauthorized Routes Added as NFTS Trails with | |
| Resource Issues | .296 |
| Table 146. Alternative 4 – Unauthorized Routes Added as NFTS Roads with | |
| | .296 |
| Table 147. Alternative 4 – Use Areas with Botanical Resource Issues | |
| Table 148. Alternative 4 – Road Closures for Botanical Resources | |
| Table 149. Alternative 5 – Unauthorized Routes Added as NFTS Trails | |
| Table 150. Alternative 5 – Unauthorized Routes added as NFTS Roads | |
| Table 151. Alternative 5 – Use Areas | |
| Table 151. Alternative 5 – Ose Aleas | |
| | |
| Table 153. SNF Noxious Weed Species Relevant for the Travel Management DEIS | |
| | .317 |
| Table 154. Summary of Noxious Weed Species Found on or Near or on | h |
| Unauthorized Routes (Alt 1) or Proposed NFTS Facilities (Alts 2,4 and 5) | - |
| Alternative | |
| Table 155. Risk of Spread of Noxious Weeds by Alternative | |
| Table 156. Alternative 1 – Risk of Weed Introduction and Spread | |
| Table 157. Alternative 2 – Unauthorized Routes Proposed to be Added as NF | |
| | .324 |
| Table 158. Unauthorized Routes Proposed to be Added to the NFTS of Road | |
| | .324 |
| | .327 |
| Table 160. Alternative 4 – Unauthorized Routes Added as NFTS Roads | - |
| Table 161. Alternative 5 – Unauthorized Routes Added as NFTS Trails | |
| Table 162. Alternative 5 – Unauthorized Routes Added as NFTS Roads | .330 |
| Table 163. Identify Wildlife Special Status Species on the Sierra National For | est |
| | .336 |
| Table 164. Road and Trail Associated Factors with Disturbance and Activity T | ӯре |
| and Affected Wildlife Group | .344 |
| Table 165. Wildlife Group and Species Represented Within Groups | .345 |
| Table 166. Differences between Alternatives in Allowable Motorized Use with | |
| the Analysis Area | |
| Table 167. Percent Gain in Terrestrial Wildlife Habitat Effectiveness (or Availa | |
| Habitat*) Per Alternative | |
| Table 168. Mitigation Measures for Terrestrial Biota | |
| | |

| Table 169. Road Density by Alternatives Including all Jurisdictions in the Projection | |
|---|------|
| | .350 |
| Table 170. Road and Unauthorized Route Density within MIS Vegetation Typ | |
| | .351 |
| Table 171. Indicators per Alternative for Late Seral Closed and Open Canopy | |
| Coniferous Forest Habitat Table 172. California Spotted Owl Indicators – Alternative 2 | |
| Table 172. California Spotted Owl Indicators – Alternative 2 | |
| · | |
| Table 174. California Spotted Owl Indicators – Alternative 5 | |
| Goshawk Territories or PACs | |
| Table 176. Northern Goshawk Indicators – Alternative 2 | |
| Table 177. Northern Goshawk Indicators – Alternative 2 | |
| Table 178. Northern Goshawk Indicators – Alternative 5 | |
| Table 179. Seasonal and Prohibited (Closed Year Round) Changes to NFTS | .000 |
| roads Goshawk PACs | 365 |
| Table 180. Great Gray Owl Indicators – Alternative 2 | |
| Table 181. Great Gray Owl Indicators – Alternative 4 | |
| Table 182. Great Gray Owl Indicators – Alternative 5 | |
| Table 183. Fisher Indicators – Alternative 1 | |
| Table 184. Fisher Indicators – Alternative 2 | |
| Table 185. Fisher Indicators – Alternative 3 | |
| Table 186. Fisher Indicators – Alternative 4 | |
| Table 187. Fisher Indicators – Alternative 5 | |
| Table 188. Summary of Acres of Past and Current Activities and Acres Affect | |
| for Late-successional Species | |
| Table 189. Alternative 1 and 3 – Deer Winter Range | |
| Table 190. Alternative 2 – Deer Migration Corridors | |
| Table 191. Alternative 2 – Deer Winter Range | |
| Table 192. Alternative 2 – Deer Population Centers | |
| Table 193. Alternative 4 – Deer Migration Corridors | |
| Table 194. Alternative 4 – Deer Winter Range | |
| Table 195. Alternative 4 – Deer Population Centers | |
| Table 196. Alternative 5 – Deer Migration Corridors | |
| Table 197. Alternative 5 – Deer Winter Range | |
| Table 198. Alternative 5 – Deer Population Centers | |
| Table 199. Deer Areas that are Intersecting with Existing (Alt 1) or Added Rou | |
| (Alts 2, 4 and 5) | |
| Table 200. Direct, Indirect and Cumulative Impact to Mule Deer from Reason | ably |
| Foreseeable Future Projects | .388 |
| Table 201. Summary of Acres of Suitable Habitat by Species Group for Oak- | |
| associated Hardwood and Hardwood/conifer Species | .388 |
| Table 202. Riparian Habitat Indicators by Alternative | .394 |
| Table 203. Acres of ZOI by Alternative for Riparian Habitat | .394 |
| Table 204. Motorized Routes that Intersect with Willow Flycatcher (WIFL) | |
| Occupied Meadow Sites | .394 |

| Table 205. Compliance with LRMP and Other Direction | 404 |
|---|-------------------------|
| Table 206. RCA Widths | |
| Table 207. Special Status Species that may Occur or Have Habitat on the Sie | |
| National Forest | |
| Table 208. Miles of Stream by Analysis Unit | 419 |
| Table 209. Critical Aquatic Refuges by Analysis Unit (AU); Acres within AU, | |
| | 419 |
| Table 210. Stream Channel Sensitivity by Analysis Unit Based on Rosgen | |
| | 420 |
| Table 211. Stream Segments and/or Tributaries that have had SCI Surveys | |
| Conducted | 421 |
| Table 212. Metrics for Benthic Macroinvertebrates Collected from Several SCI | |
| | 422 |
| Table 213. For each Analysis Units, the Total Number of Proper Function | |
| Condition (PFC) Assessments Completed and Associated Ratings | 423 |
| Table 214. Existing Road Miles (All Roads Located on SNF Regardless of | |
| Jurisdiction), Inventoried Routes and Their Associated Density by Analysis | |
| Unit | 423 |
| Table 215. Miles of Roads and Inventoried Routes Located in RCAs with the | 404 |
| Associated Density by Analysis Unit | |
| Table 216. Stream Crossing Numbers and Densities (Existing Road Systems Apply and Polysia Limit | |
| Inventoried routes / Total) by Analysis Unit | |
| Table 217. Acres of HUC8 Drainage Exceeding TOC by Analysis Unit | |
| Table 218. Special Status Aquatic Wildlife Species on the Sierra National Fore Discussed Further in this Analysis | |
| Table 219. Direct and Indirect Effect Indicators for Alternative 1 through 5 for t | |
| | .11 0 440 |
| Table 220. Direct and Indirect Effect Indicators for Alternative 1 through 5 for t | _ |
| | 447 |
| Table 221. Direct and Indirect Effects Indicators for Alternative 1 through 5 for | |
| Foothill Yellow-legged Frog | |
| Table 222. Direct and Indirect Effect Indicators for Alternative 1 through 5 for t | |
| | 461 |
| Table 223. Direct and Indirect Effect Indicators for Alternative 1 through 5 for t | |
| Mountain Yellow-legged Frog | |
| Table 224. Direct and Indirect Effects Indicators for Alternative 1 through 5 for | the |
| Western Pond Turtle | |
| Table 225. Direct and Indirect Effects Indicators for Alternative 1 through 5 for | |
| Yosemite Toad | |
| Table 226. Aquatic Habitat within the HUC6 Subdrainage Forming the Analysi | S |
| Area | |
| Table 227. Indicators for Aquatic Habitat | 482 |
| Table 228. Indicator for Wet Meadow Habitat | |
| Table 229. Routes or Use Areas Determined to be Inconsistent with USFWS | |
| Project Design Criteria for the California Red-legged Frog | 487 |

 \mathbf{X}

List of Figures

| Figure 1. Areas Where Motorized Cross-country Travel is Currently Prohibite Figure 2. Vicinity Map | |
|--|-----|
| Figure 3. Map of Analysis Units | 7 |
| Figure 4. Population Trend for Counties in the SNF Region (aggregate of all | |
| three counties) | 96 |
| Figure 5. Per Capita Income | 98 |
| Figure 6. SNF 3 County Aggregation Firms by Industry in 2005 (NAICS) | 99 |
| Figure 7. Unemployment Rate | 100 |
| Figure 8. Unemployment Rate Seasonally | 100 |
| Figure 9. Method for analyzing Direct, Indirect and Cumulative Effects for the | : |
| proposed NFTS Additions (roads, motorized trails and use areas) | 127 |
| Figure 10. Views from McKinley Grove Road | 131 |
| Figure 11. Views from State Highway 41 | 131 |
| Figure 12. Views from Dinkey Creek | 132 |
| Figure 13. Views from Shaver Lake | |
| Figure 14. HUC6 subwatersheds and Critical Aquatic Refuges (CARs) within | |
| Analysis Units | 208 |
| Figure 15. Percentage of fines in pools by water year | |
| Figure 16. Subdrainages (HUC8s) containing inventoried unauthorized routes | |
| and/or areas that were determined to be over their lower TOC, based on | |
| Baseline ERA calculations for this project | 224 |
| Figure 17. Subdrainages (HUC8s) containing routes or areas included in | |
| Alternative 2 that were evaluated in the Detailed Assessment | 243 |
| Figure 18. HUC8 subdrainages that were evaluated in the Detailed CWE | |
| Assessment for Alternative 4 | 251 |
| Figure 19. HUC8 Subdrainages that were Evaluated in the Detailed CWE | |
| Assessment for Alternative 5 | 258 |
| Figure 20. Subdrainages exceeding Threshold of Concern (TOC) within the | |
| Analysis Units | 426 |

SUMMARY OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

PROPOSED ACTION

The Sierra National Forest (SNF) proposes the following actions:

1. The prohibition of motor vehicle travel off designated National Forest Transportation System (NFTS) roads, trails and areas by the public except as allowed by permit or other authorization (this prohibition would not apply to snowmobiles). 2. The addition of 40 miles of existing unauthorized routes (with proposed season of use) to the current system of NFTS (National Forest Transportation System) trails and 6 miles to the current system of NFTS roads, and the permanent conversion of 91 miles of NFTS roads to NFTS trails. 3. The addition of one area, totaling 6 acres, where use of motor vehicles by the public would be allowed anywhere within that area. 4. The changing of the allowable use or season of use on approximately 753 miles of existing NFTS roads and prohibiting vehicle use on approximately 204 miles of existing NF Transportation System roads unless allowed by permit or other authorization. And 5; this DEIS proposes a non-significant Forest Plan (LRMP) amendment to designate two trails additions to the NFTS (0.77 miles) within the Recreation Opportunity Spectrum (ROS) class Semi-Primitive, Non-Motorized area as defined in the SNF Forest Plan (LRMP).

SIGNIFICANT ISSUES

Internal and external scoping identified the following significant issues and these issues were used to develop the action alternatives. The significant issues include the following:

Table 1. List of Significant Issues

| Issue Topic | Concern |
|--------------------------------|--|
| 1. Impacts to Motorized Access | There is concern that the proposed action does not provide adequate motorized access to routes and other recreational use areas and would not provide a sufficient variety of types of motorized recreational experiences. Public comments indicate that motorized access would be closed to areas including dispersed campsites, vistas, picnic areas, off-highway vehicle (OHV) staging and off-loading areas, equestrian parking areas, hang gliding, fishing and rock climbing areas which have been enjoyed by the public for many years. It is perceived that the proposed action does not provide enough opportunities specifically for motorcycles and ATVs or for loops and technical areas (hill climbs, rock crawling, etc.) and this diminishes the variety of recreational experiences the public desires. Some commenters have historic ties to certain locations that would be closed in the proposed action. Some people also voiced concerns that access from their private property onto motorized routes on Forest lands would be closed, which they feel would affect their enjoyment of their property. |

| Issue Topic | Concern |
|--|--|
| 2. Motorized Use and Ownership Conflicts | There is concern that the number of miles of routes open under the proposed action, as well as the location of some of those routes, would result in conflicts between motorized and non-motorized users and conflicts between different types of motorized users (4X4, ATV, motorcycle). Some members of the public believe that concentrating motorized use on designated routes and areas would cause overcrowding of those areas and this would increase conflicts, leading to an overall degradation of the recreational experience. Some comments indicated that there would be conflicts with private property owners once the use of certain routes near private property increases due to this concentration of users. |
| 3. Impacts to Natural and Cultural Resources | There is concern that the proposed action would result in increased impacts to natural and cultural resources. Edge effects, soil erosion, spread of noxious weeds and crushing of native plants were mentioned as impacts to vegetation. Fragmentation and noise disturbance were cited as impacts to wildlife habitat. Loss of groundcover, soil erosion and sedimentation into streams, especially related to trails crossing streams, were noted to impact water quality and aquatic habitat. Some concerns were expressed for motorized use in specific areas with cultural resource values. Concern was also articulated over impacts to air quality resulting from the operation of ATVs and motorcycles. |
| 4. Impacts to Non- motorized recreational experiences | There is concern that the motorized access allowed in the proposed action would impact both the availability of opportunities and the quality of non-motorized recreation. This was particularly important to hikers, hunters and anglers. Everyone who expressed this concern mentioned the impacts of vehicle noise and trail dust on their experience. Hunters and anglers noted that easy access increases the pressure on fish and wildlife. This can reduce hunting and fishing success and/or the size of the animals present. Anglers were concerned that motorized access into certain areas could result in trail erosion and sedimentation of prime fisheries streams, reducing the viability of the populations found there. |

ALTERNATIVES CONSIDERED IN DETAIL

The SNF developed five alternatives: the no action (Alternative 1), the proposed action (Alternative 2) and three other action alternatives (Alternatives 3, 4 and 5) generated in response to the significant issues listed in Table 1. The five alternatives considered in detail for this analysis are listed in Table 2. Complete details of the alternatives, including project mitigation measures, are found in Chapter 2 (Alternatives) of this document.

Table 2. List of Alternatives Considered in Detail

Alternative 1: No Action Alternative

The no action alternative provides a baseline for comparison. Under the no action alternative, current management consists of managing off-highway use as determined by the Forest Supervisor in April 1977 (Environmental Analysis Report of the Impact of Off-Road Vehicle Use on the Sierra National Forest). This decision was implemented by Forest Order 15-77-3. The plan identified areas where motorized travel was prohibited or motorized travel was restricted to designated routes. These areas are depicted in Figure 1. In this alternative, 660,000 acres of National Forest System lands would remain open to motorized cross-country use. The current National Forest Transportation System (NFTS) of roads is defined under the Sierra National Forest 1998 Road Closure Plan and implemented by Forest Order R5-83-3.

No changes would be made to the current NFTS and no cross-country travel prohibition would be put into place. The Travel Management Rule would not be implemented and no Motor Vehicle Use Map (MVUM) would be produced. Motor vehicle travel by the public would not be limited to designated routes, except within areas described in Figure 1. Unauthorized routes would continue to have no status or authorization as NFTS facilities.

Key Actions:

Continues prohibition of motorized cross-country travel where motorized travel was prohibited or motorized travel was restricted to designated routes

Adds no new NFTS facilities

Allows motorized cross-country travel in areas on the SNF outside those where motorized travel was prohibited or motorized travel was restricted to designated routes

Alternative 2: Proposed Action

The proposed action was developed based on Agency knowledge (including route inventory) and public input regarding popular routes for motorized recreation and is comprised of the prohibition of cross-country motorized travel, the proposed additions to the NFTS and the proposed changes to the existing NFTS as described in the NOI published September 11, 2007 (Volume 72, Number 175) with some modifications. Alternative 2 meets the objective of prohibiting cross-country travel. Routes proposed for addtion in Alternative 2 contribute to the following variety of riding experience: motorcycle (7 percent), ATV and quads (50 percent) and fourwheel drive (43 percent). The range of motorized recreation difficulty is easy (50 percent), moderate (36 percent) and difficult (13 percent). In some areas, the riding experience is enhanced due to extended riding time with access to loops and a larger network of roads and motorized trails. Motorized access to dispersed recreation is low. Alternative 2 also proposes a non-significant Sierra National Forest Plan (LRMP) amendment to designate two trail additions to the NFTS (0.77 miles) within the Recreation Opportunity Spectrum (ROS) class Semi-Primitive, Non-Motorized area as defined in the LRMP (USDA-FS 1991).

Key Actions:

Prohibits cross-country motorized travel

Adds 40 miles of NFTS motorized trails (103 routes)

Adds 6 miles of NFTS roads (33 roads)

Adds 6.1 acres within one use area open to motor vehicle use Changes the season of use on 753 miles of existing NFTS roads (839 segments); as a result of these changes, 1014 miles of existing NFTS roads will have seasonal open

Changes vehicle class on 159 miles of existing NFTS roads (58 roads)

Prohibits all vehicle use on 204 miles of existing NFTS roads (395 roads)

Changes 0 miles of NFTS roads to operate as combined use roads under California State Vehicle Code 38026

Alternative 3

Alternative 3 responds to issues of impacts to natural and cultural resources and impacts to non-motorized recreational experience by prohibiting motorized cross-country travel without adding any additional facilities to the NFTS. Alternative 3 meets the objective of prohibiting cross-country travel. This alternative also provides a baseline for comparing the impacts of other alternatives that propose changes to the NFTS. No changes would be made to the current NFTS.

Key Actions:

Prohibits cross-country motorized travel Adds no new NFTS facilities

Alternative 4

Alternative 4 responds to issues of impacts to natural and cultural resources and impacts to non-motorized recreational experience by prohibiting motorized cross-country travel and adding routes and roads in locations that avoid or mitigate for sensitive resources. Alternative 4 meets the objective of prohibiting cross-country travel. Added miles of NFTS roads provide access to dispersed recreation opportunities. Added of miles of NFTS trails contribute to the following variety of riding experience: motorcycle (75 percent), ATV and quads (39 percent) and four-wheel drive (54 percent). The range of motorized recreation difficulty is easy (72 percent), moderate (24 percent) and difficult (4 percent). In some areas the riding experience is enhanced due to extended riding time with access to loops and a larger network of roads and trails. Seasonal and year round road closures are applied where needed for resource protection. Alternative 4 also proposes a non-significant Forest Plan (LRMP) amendment to allow two of the proposed route additions to the NFTS (1.64 miles) to be designated within the Recreation Opportunity Spectrum (ROS) class Semi-Primitive. Non-Motorized area as defined in the LRMP(USDA-FS 1991).

Key Actions:

Prohibits cross-country motorized travel

Adds: 42 miles NFTS motorized trails (96 routes)

Adds: 9 miles NFTS roads (43)

Adds 37.2 acres within 11 use areas open to motor vehicle use Changes the season of use on 1404 miles of existing NFTS roads (1271 segments); as a result of these changes, 1530 miles of existing NFTS roads will have seasonal open periods

Changes vehicle class on 175 miles of existing NFT system roads (76 roads)

Prohibits all vehicle use on 268 miles of existing NFTS roads (395 roads)

Changes 0 miles of NFTS roads to operate as combined use roads under California State Vehicle Code 38026

Alternative 5

Alternative 5 responds to issues of impacts to motorized access and motorized use and ownership conflicts. This alternative prohibits cross-country travel and adds facilities (roads, trails and areas) to the NFTS to provide access and recreation opportunity. Alternative 5 meets the objective of prohibiting cross-country travel. Added miles of NFTS roads provide access to dispersed recreation opportunities. Added miles of NFTS trails contribute to the following variety of riding experience: motorcycles (8 percent), ATV and Quads (44 percent) and four-wheel drive (48 percent). The range of motorized recreation difficulty is easy (70 percent), moderate (24 percent) and difficult (4 percent). Seasonal and year round road closures are applied where needed for resource protection.

Alternative 5 also proposes a non-significant Forest Plan (LRMP) amendment to designate two trail additions to the NFTS (1.64 miles) within the Recreation Opportunity Spectrum (ROS) class Semi-Primitive, Non-Motorized area as defined in the LRMP (USDA-FS 1991).

Key Actions:

Prohibits cross-country motorized travel

Adds: 71 miles NFTS motorized trails (167 routes)

Adds: 14 miles NFTS roads (62)

Adds 113.1 acres within 20 areas open to motor vehicle use Changes the season of use on 1551 miles of existing NFTS roads (1508 road segments); as a result of these changes, 1600 miles of existing NFTS roads will have seasonal open periods

Changes vehicle class on 302 miles of existing NFT system roads (130 roads)

Prohibits all vehicle use on 155 miles of existing NFTS roads (368 roads)

Changes 47 miles of NFTS roads to operate as combined use roads under California State Vehicle Code 38026

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

For a summary of environmental impacts refer to Table 32. Summary Direct and Indirect Effects of the Alternatives on Forest Resources on page 42.